

What is claimed is:

1. A method for increasing data transmission speed in an international standard (IS)-95B system including one or more inter working function (IWF) units, one or more IWF interface units that are included in one or more mobile switching centers and one or more base station controllers (BSCs), the method comprising the steps of:

a) by the IWF interface unit, when receiving a frame relay (FR) frame from the IWF unit, counting total bytes included in the FR frame and storing the FR frame in a storage unit of the IWF interface unit;

b) determining if data bytes included in the FR frame are larger than bytes needed to generate an inter system link protocol (ISLP) frame of maximum size;

c) if the data bytes included in the FR frame are larger than the bytes needed to generate the ISLP frame of maximum size, generating and transmitting the ISLP frame of maximum size to the BSC based on the FR frame;

d) determining if remaining data bytes included in the FR frame that is stored in the storage unit are larger than the bytes needed to generate the ISLP frame of maximum size; and

e) if the remaining data bytes are not larger than the bytes needed to generate the ISLP frame of maximum size, generating and transmitting the ISLP frame to the BSC based on the remaining data bytes and another FR frame transmitted from the IWF unit, otherwise repeating the step b).

2. The method as recited in claim 1, wherein at the step c), the IWF interface unit generates the ISLP frame of maximum size by converting the FR frame to the ISLP frame.

5 3. The method as recited in claim 1, wherein the step d) further includes the step of:

if the remaining data bytes are larger than the bytes needed to generate the ISLP frame of maximum size, repeating the step c).

10 4. The method as recited in claim 1, wherein the step e) includes the steps of:

e1) by the IWF interface unit, determining if another FR frame is received from the IWF unit;

15 e2) if another FR frame is received from the IWF unit, counting total bytes included in another FR frame and storing another FR frame in the storage unit of the IWF interface unit;

20 e3) adding the remaining data bytes to data bytes included in the another FR frame to thereby generate combined data bytes;

e4) determining if the combined data bytes are larger than the bytes needed to generate the ISLP frame of maximum size;

25 e5) if the combined data bytes are larger than the bytes needed to generate the ISLP frame of maximum size, generating and transmitting the ISLP frame of maximum size to the BSC

based on the combined data bytes and then repeating the step
d);

e6) if the combined data bytes are not larger than the
bytes needed to generate the ISLP frame of maximum size,
5 generating and transmitting the ISLP frame of non-maximum size
to the BSC based on the combined data bytes.

5. The method as recited in claim 4, wherein at the step
e5), the IWF interface unit generates the ISLP frame of
10 maximum size by converting the combined data bytes to the ISLP
frame.

6. The method as recited in claim 4, wherein at the step
e6), the IWF interface unit generates the ISLP frame of non-
15 maximum size by converting the combined data bytes to the ISLP
frame.

7. The method as recited in claim 4, wherein the step e2)
further includes the step of:

20 e7) if another FR frame is not received from the IWF unit,
generating and transmitting the ISLP frame of non-maximum size
to the BSC based on the remaining data bytes.

8. The method as recited in claim 7, wherein at the step
25 e7), the IWF interface unit generates the ISLP frame of non-
maximum size by converting the remaining data bytes to the
ISLP frame.